26. ON THE HABITS OF INDIAN ERESID SPIDERS *STEGODYPHUS SARASINORUM* KARSCH

(With a plate)

The untidy but prominent cob-webs of the Indian Eresidae—*Stegodyphus sarasinorum*—are a common feature along fences, over bushes or attached to the terminal branches of trees. The Eresidean nest resembles a shapeless mass of sponge and is made up of tough silk threads, dry leaves and twigs and other foreign materials bound together in the form of a closed box with several holes on the sides. The holes are the entrances. *S. sarasinorum* is a social species and hundreds of members both male and female live together in a single nest. From one or both sides of the central nest, temporary extensions are often made in the form of a loose expansive net spread obliquely or vertically like the sail of a boat. The meshy sheet formed of white viscid threads is intended not for residence but for trapping the prey. The mesh is so sticky and elastic that an insect unfortunate enough to come into contact with it can never escape.

The largest Eresidean web I saw was sometime in April last (1952). It was constructed on a bamboo fence by the side of a paddy field in Chettupuzha, a suburb of Trichur (Cochin State). The nest looked like a pyramidal sac about 2 ft. long and the distal end 1 ft. square. A tenacious sheet of about 4 sq. yds. extended obliquely from one of its sides. As the nest was in our own lands I could study something interesting about the habits of these spiders. During daytime the members used to remain inside the nest, but whenever any insect was caught in the net they streamed out, encircled the prey and carried it back to the nest. Bees, flies, earwigs, butterflies, grasshoppers and even locusts were often caught in the trap. The juice of these insects was sucked by the spiders and the remains, i.e. integuments, wings, etc. were not thrown out but utilized as a building material along with silk for the extension and reinforcement of the nest. Towards dusk the spiders came out of the nest and were found inspecting and repairing the meshy sheet.

During September (1952) while harvesting the crops in the field, the above Eresidean nest was badly damaged by the farmers who cleared that portion of the fence to carry the sheafs out. I, having failed to trace the spiders among the torn and shattered cob-web that lay strewn in the field, believed that they must have all been eaten by the crows and egrets that flocked in the harvested field in search of corn and insects. Later on, however, I came to know that my conclusion was wrong. A few yards away from the original site of the nest, there stood a cashewnut tree about 25 ft. high. On the morning following the day on which the nest was destroyed, I was passing by this tree and to my surprise I found a line of Eresids climbing up it by a fairly strong silk thread which connected the fence with its topmost branch. Certainly these spiders were none other than those which I believed to have been lost. When the original abode was damaged they were shifting themselves to a new surrounding by means of their characteristic 'rope trick'. In three days' time they had built a new nest on the tree top, of course, in dimensions

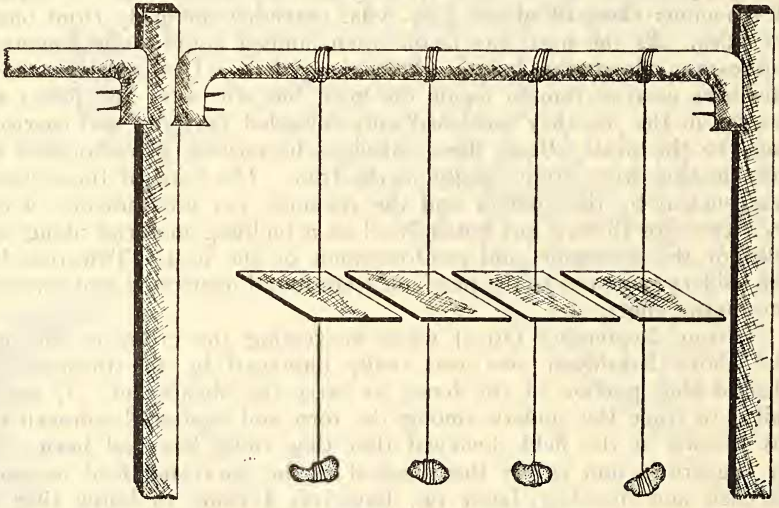
very much smaller than the original one. Although this shift was a forced one and did cost the spiders their original shelter and other possessions, the new premises were by no means less advantageous to them as the tree had just commenced flowering and bees and flies were hovering over the blossoms.

c/o The Cement Marketing Co. of India Ltd.,
No. 1, Queens Road, Fort, T. V. SUBRAHMANYAM, B.A.
Bombay-1,
October 20, 1952.

27. A NOTE ON THE EFFECT OF LIGHT AND THE COLOUR OF THE SUBSTRATUM ON THE SETTLEMENT OF BARNACLES[1]

(*With a text figure and a plate*)

The probable effect of light on the settlement of barnacles has been a battlefield of conflicting theories. Studies on the effect of the surface angle and of light on the attachment of *Balanus eburneus* have revealed that the photic character is of primary importance.



Text Fig. 1

Showing the arrangement of the blocks in the sea

(1) While some workers (2, 3, 4 & 5) have found that barnacles 'react negatively to light at the time of attachment', various others (6, 7 & 8)

[1] Contribution from the Marine Biological Station, Krusadai Island, Pamban, Gulf of Manaar. Published with the kind permission of the Director of Fisheries, Madras.